Contractor: Air Academy Associates, LLC

Contract #: GS-10F-0057S

GSA AUTHORIZED FEDERAL SUPPLY SCHEDULE PRICE LIST

Mission Oriented Business Integrated Services (MOBIS)

1650 Telstar Drive, Suite 110 Colorado Springs, CO 80920 Phone: (800) 748-1277 Fax: (719)

531-0778

EXECUTIVE SUMMARY

Air Academy Associates LLC is a Colorado Springs based company that has been in business for fifteen years. Since then, it has become a global leader in partnering with industry, government and academia in the knowledgeable, disciplined and accountable implementation of knowledge based enterprise transformation for systemically reducing waste and variation in their products, services and processes.

Research and benchmarking have indicated that 15 to 35% of industry's annual revenue is consumed by waste and variation. As globalization and commoditization intensifies, leadership within industry has three choices to remain competitive. They can reduce profits, reduce the costs of labor and materials or reduce this waste and variation.

Though Government does not operate to create profit, it provides products and services for the direct benefit of its citizens. Delivery of such products and services, as in industry, suffers from waste and variation in the form of inefficiencies in timeliness, cost and accuracy.

Air Academy Associates is fortunate to have some of the very best people in the world who are highly trained and experienced in the right tools and using the right texts, guides and software to significantly and systematically reduce waste and variation in Government and industry. This is precisely what Air Academy Associates has accomplished in direct support of over 100 major enterprises. Billions of verifiable dollars have been saved along with improved value delivery to its customers through Air Academy Associates' proven knowledge and experience in consulting, facilitation and training. Air Academy Associates has two partners, six senior associates, twenty independent consultants and five administrative support members. It also utilizes over twenty-five alliance consultants and sub-contractors worldwide for surge support and specialized services. It was a ground floor participant in the initial conceptualization and implementation of Six Sigma at Motorola. As part of its approach to Knowledge Based Management, Air Academy Associates was a pioneer in integrating the principles, tools, methodologies and project roadmaps of Lean Six Sigma (LSS) and Design for Lean Six Sigma (DFLSS). It's Keep-It-Simple-Statistically or KISS approach to simplification (Lean) and perfection (Six Sigma) is used by business, Government and academia worldwide and emulated by our competitors.

Air Academy's senior associates and independent consultants have, on average, over twenty years of practical experience in LSS and DFLSS consulting, facilitation and training. Each has a passion for action and early results for the clients they support. Each follows a proven process for generating early financial benefits and self-sustainability for their clients. Our associates and consultants are well versed in understanding client requirements and translating those requirements into a flexible, highly capable and properly scaled implementation solution. The results from such investments are impressive. Clients receive 0.5 to 1% of annual revenue back in "hard" verifiable P&L benefits during their full first year of deployment. Second year and beyond benefits equal or exceed 2% of revenue. Other benefits include increased value delivery for their customers and owners, enhanced intellectual capital derived from the projects and Kaizens that are commissioned and positive culture change.

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Our Value System

We work closely our industry and Government customers with integrity, honesty and ethics. We treat people with the respect and dignity they deserve along and with gratitude and appreciation. Our success is not measured by the revenue we earn, but by the verifiable and measurable success experienced by our clients. We continuously collect and evaluate feedback from our clients to ensure consistency and quality of effort. We also value early self-sustainability within our client base thereby enabling their employees to perform the consulting, facilitation and training previously accomplished by ours.

Materials and Software

We are the only first-tier Lean Six Sigma service provider that exclusively designed, developed, tested, deployed and continuously improved its own, fully integrated texts, guides and software. Each follows our famous "KISS" approach mentioned earlier. Our software is Excel-based to facilitate ease of use without sacrificing capability. Our in- class, e-learning and blending teaching approaches are cutting edge, continually improved and cost-effective for our customers. The minimum return-on-investment from utilizing our profession services capabilities and support products (e.g. guides, texts and software) is 10:1 and often ranges between 20 or 30:1.

2 - Enterprises We Support

Our clients include businesses ranging in annual revenue from \$ 100M to \$20B annually. These include Alcoa, Allied Signal/Honeywell, Apogee Enterprises, ATMI, BF Goodrich, Bombardier, Bose, Brunswick, Cessna, Chevron Texaco, Corning, Danaher, Dell, EMC, Gates Rubber, General Dynamics, General Electric, GlaxoSmithKline, Grupo IMSA, Heritage Valley Health, Holley Performance, Hyundai, John Deere, Johnson Controls, Kaiser Aluminum, KIA, Lockheed Martin, Merck Medco, Nationwide Insurance, Nokia, Northrop Grumman, Nova Chemicals, Perkin Elmer, Raytheon, Samsung, Singer, Sony, Stanadyne, Thilmany, St. Jude Medical, Textron Financial, University of Texas, Woodward Governor, Xerox and many others. We are also partnering with Government agencies including the U.S. Army, Navy and Air Force, the Federal Aviation Administration, NASA, the U.S. Postal Service, the National Imagery and Mapping Agency, the National Reconnaissance Office and the Defense Contract Management Agency.

Our Generalized Deployment Approach

Our generalized deployment approach synchronizes LSS and DFLSS to the method by which our clients both manage and improve their enterprise, be it Government, industry. or academia. Phase One emphasizes "Initialization" whereby the client's voice of the customer, mission, strategic plan, measures/metrics and scorecards are understood and a LSS or DFLSS Deployment Plan is appropriately formulated. Phase Two involves "Execution" whereby the right projects and Kaizen events are commissioned, led by the right people and continually monitored by the leadership to ensure timely completion and benefit realization. Phase Three involves "Assessment" whereby the actual versus projected benefits are compared and corrected by amending the original LSS or DFLSS Deployment Plan. Each phase along with the key subtasks within each phase is illustrated in the chart below.

Proposed Quality Measures and Accounting Controls

Governmental implementation of Lean Six Sigma and Design for Lean Six Sigma must yield timely and verifiable benefits that directly contribute to their mission-unique measures, metrics

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and/or scorecards. "Hard" savings that measurably and verifiably reduce their budgetary obligations also represent a key quality measure. Other "soft" quality measures include the number of employees trained, the percentage of time spent on management-approved LSS or DFLSS projects, the benefits (\$) per employee, project cycle times/average duration, employee "certification" levels, sigma capability versus time on key processes and services, return-on-investment, etc. All hard and soft quality measures are collaboratively developed during the Initialization Phase between the Government agency and Air Academy Associates. They are collected and regularly reviewed by both in accordance with the agencies' LSS or DFLSS Deployment Plan to ensure knowledge, discipline, full accountability and control.

3 - Authorized Federal Supply Schedule Price List

Online access to contract ordering information, terms and conditions, up-to-date pricing and the option to create an electronic delivery order is available through GSA *Advantage*, a menudriven database system. The Internet address for GSA *Advantage* is https://www.gsaadvantage.gov/advgsa/advantage/main/start_page.do.

Contract Number: GS-10F-0057S **Contract Period**: – November 18, 2015

Contract Administrator: Kathi Swagerty Strategic Campaign Director

Office: 480-236-3639 Facsimile: (719) 531-0778

KSwagerty@airacad.com
DUNS Number: 618520282

Business Size: Small

Approved Special Item Numbers: 874-1: Consultation Services 874-2:

Facilitation Services 874-4: Training Services

GSA AUTHORIZED FEDERAL SUPPLY SCHEDULE PRICE LIST Mission Oriented

Business Integrated Services (MOBIS)

AIR ACADEMY ASSOCIATES LLC

CUSTOMER INFORMATION SERVICES AND PRICING

CUSTOMER INFORMATION 1a. TableofAwardedSpecialItemNumbers(SINS):

874-1: Consultation Services 874-2: Facilitation Services 874-4: Training Services

1b. IdentificationoftheLowestPricedItem/ServiceandLowestUnitPriceforThat Item/Service for Each Special Item Number Awarded.

Prices shown in the price list are valid for all areas worldwide. Travel costs will be expensed in accordance with Joint Travel Regulations. For any overseas work, pricing will also reflect current State Department indices of living costs abroad.

2. Maximum Order Limitation: \$1 million 3. Minimum Order: \$300 4. Geographic Coverage (Delivery Area): Worldwide. 5. Point of Production: 1650 Telstar Drive, Suite 110 Colorado Springs, CO 80920

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6. Discount From List Prices or Statement of Net Price:

Prices shown in the price list are net with all discounts deducted. **7. Quantity Discounts:** As reflected in the price list.

8. Prompt Payment Terms:

Net - 30 Days Other - 1/2% 10 Days

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9a. Annotate if Government Commercial Purchase Card is Accepted: [X] Yes, [] No

The types of Government purchase card(s) accepted for payment are American Express, VISA and Master Card.

9b. Discount for Payment by Government Commercial Credit Card: None. 10. Foreign Items: None.

11a. Time of Delivery:

To be determined at the time of task order/delivery.

11b. Expedited Delivery:

To be determined at the time of task order/delivery.

11c. Overnight and Second Day Delivery:

To be determined at the time of task order/delivery.

11d. Urgent Requirements:

Air Academy Associates will negotiate with the contracting agencies on an ad hoc basis in an effort to met accelerated delivery for rush requirements.

12.FOB Point(s): Destination. 13.Ordering Address:

Please forward all orders to the designated individual at the address below:

Air Academy Associates LLC Attn: Kathi Swagerty 1650 Telstar Drive, Suite 110 Colorado Springs, CO 80920

Telephone: (719) 785-6711 Facsimile: (719) 531-0778 KSwagerty@airacad.com

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14. Payment Address:

Air Academy Associates LLC Attn: Kathi Swagerty 1650 Telstar Drive, Suite 110 Colorado Springs, CO 80920 Telephone: (719) 785-6711 Facsimile: (719) 531-0778

15. Warranty Provision:

Air Academy Associates warrants and implies that the items delivered hereunder are merchantable and fit the particular purpose described in the contract.

16. Export Packing Charges: N/A 17. Terms and conditions of Government Commercial Credit Card Acceptance:

Payments made using the Government-wide commercial purchase card are not eligible for any negotiated prompt payment discount.

18. Terms and Conditions of Rental, Maintenance and Repair: N/A 19. Terms and Conditions of Installation: N/A

20. TermsandConditionsofRepairPartsIndicatingDateofPartsListsand Discounts from List Prices: N/A

21. List of Service and Distribution Points: N/A 22. List of Participating Dealers: N/A 23. Preventative Maintenance: N/A 24. Year 2000 (Y2K) Compliant:

Any information technology products supplied will be Y2K compliant.

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25. Environmental Attributes, e.g. Recycled Content, Energy Efficiency and/or Reduced Pollutants:

Air Academy Associates will comply with any applicable environmental guidelines/regulations associated with the production and distribution of products and services under this GSA Schedule.

AMENDMENT OF SOLICITATION	MODIFICATION	OF CONTRACT	1. CON	TRACT ID	CODE	PAGE OF PAGES
2. AMENDMENT/MODIFICATION NO. PS-0003	3. Effective Date 11-18-2015	4. REQUISITION/PURCHASE	E REQ. NO		5. PROJECT NO 874	(IF APPLICABLE)
6. Issued By Code		7. ADMINISTERED BY	(If other th	an Item 6) Code	THE PERSON NAMED IN COLUMN TO THE PE
GSA, MANAGEMENT SERVICES CTR 400 15TH ST, SW RM 2757 (AQSA) AUBURN, WA 98001		GSA/FAS CONT N 401 WEST PEACH ATLANTA GA 30	ITREE	ST		
8. Name and Address of Contractor (No., street, county,	State and ZIP Code	1	(x)	9A. AME	ENDMENT OF SOLIC	TATION NO.
AIR ACADEMY ASSOCIATES, LLC 1650 TELSTAR DR STE 110 COLORADO SPRINGS, CO 809201009			X	10A. M	DED (SEE ITEM 11)	NTRACT/ÖRDER NO.
		.15	^		ATED (SEE ITEM 13)	
CODE	FACILITY CODE				8, 2005	
The above numbered solicitation is amended as		O AMENDMENTS OF S	-	TATION	is extended	is not extended.
(c) By separate letter or telegram which includes a refere AT THE PLACE DESIGNATED FOR THE RECEIPT OF virtue of this amendment you desire to change an offer a to the solicitation and this amendment, and is received p 12. ACCOUNTING AND APPROPRIATION DATA (If re	OFFERS PRIOR TO THE I Irredy submitted, such char rior to the opening hour and quired)	HOUR AND DATE SPECIFIED age may be made by telegram data specified.	MAY RE	SULT IN provided	REJECTION OF sach telegram or i	YOUR OFFER. If by
		DIFICATIONS OF CO				
A. THIS CHANGE ORDER IS ISSUED PURSUNO. IN ITEM 10A. B. THE ABOVE NUMBERED CONTRACT/ORD date, etc.) SET FORTH IN ITEM 14, PURSU	DER IS MODIFIED TO REFL JANT TO THE AUTHORITY	ECT THE ADMINISTRATIVE OF :				
[X] C. THIS SUPPLEMENTAL AGREEMENT IS EN 52.212-4 Contract Terms at	nd Conditions - Comm		h (c) Ch	anges		
E. IMPORTANT: Contractor is not 14. DESCRIPTION OF AMENDMENT/MODIFICATI The above numbered contract under Multiple Awa follows:	ON (Organized by UCF sec	sign this document and tion headings, including solid 74-Mission Oriented Busin	tation/con	tract subje	ect matter where	easible.)
1. The Commercial Sales Practice (CSI Corporation, Germalto UK LTD, Gener Corporation, Pittsburg Glass work, SAI Xerox Corporation as the firm's MFCs regards to the price reductions clause 55 or lower than the prices charged to the 0.75% Industrial Funding Fee (IFF).	al Physics Corporat C, Singer Sewing C / BOAs for the awar 52,238-75 (Alternate	cions, Hunter Douglas company, Singer Wor rded labor categories e I) is identified as fo	s. Omfordations. The parties.	omotas , Stana orice/di GSA c	SA, Lockhe dyne, Thilm iscount relati contract price	ed Martin any LLC and onship in es are equal to
Except as provided herein, all terms and conditions of the						
15A. NAME AND TITLE OF SIGNER (Type or print) ### April : Supply of 15B. SONTRACTOR/OFFEROR ##################################	rategic ,s	GA. NAME AND TITLE OF C Sally B. Kawakami Centracting Officer 6B. UNITED STATES OF AN	MERICA	200	FICER (Type or pr	18C. DATE SIGNED
(Signature of person authorized to sign) NSN 7540-01-152-8070 PREVIOUS EDITION UNUSABLE	30-105	(Signature of 0	Johnston	81 Pr	TANDARD FORM escribed by GSA, AR (48 CFR) 53.2	

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CSP identifies all Commercial Customers as the firm's MFC / BOA for the awarded training classes The price/discount relationship in regards to the price reductions clause 552.238-75 (Alternate I) is identified as follows: GSA contract prices are at least 20% lower than the prices charged to the customer / category of customer identified in the CSP. Prices are inclusive of the 0.75% Industrial Funding Fee (IFF).

- 2. In accordance with Clause 52.212-3, "Offerors Representations and Certifications Commercial Items", and Clause 52.219-28, "Post-Award Small Business Program Representation. Contractor has re-represented their business size status for this option period as small under NAICS code 541611 and the Representation and Certifications cited at http://orca.bpn.gov are current, accurate, complete and hereby incorporated as of the date in Block 15C.
- 3. Below is the hourly pricing for SINs 874-1, 874-2 and 874-4 for option 1 (years 6 10) will remain in effective until revised in accordance with clause I-FSS-969 Economic Price Adjustment FSS Multiple Award Schedule contract (Jan 2002) (b) (2):

Labor Category	Government Site Hourly Rate / Daily Rate	AAA Site Daily Rate
CEO / President	\$250.00 / \$2,500.00	\$2,500.00
Vice President	\$250.00 / \$2,500.00	\$2,500.00
Director	\$250.00 / \$2,500.00	\$2,500.00

Training Courses / Length of Course	Course Rate
Lean Six Sigma Executive Training (1 Day)	
Total Cost, Minimum Class Size:	\$3,988.00
Total Cost, Maximum Class Size:	\$5,770.00
Cost is per Participant for Materials (For Class Sizes Between 10 and 25):	\$118.80
Six Sigma Executive Training (1 Day)	
Total Cost, Minimum Class Size:	\$3,680.00
Total Cost, Maximum Class Size:	\$5,000.00
Cost/Participant for Materials Only (For Class Sizes Between 11 and 25):	\$154.00
(DFSS) Pre-Requisite (Pre-Req for DFLSS or DFSS) - (5 Days) Total Cost, Minimum Class Size:	\$19,800.00
Total Cost, Minimum Class Size:	\$19,800.00
Total Cost, Maximum Class Size:	\$28,500.00
Cost/Participant for Materials Only (For Class Sizes Between 11 and 25):	\$580.80
Design for Lean Six Sigma (DFLSS) Capstone or Design for Six Sigma (DFSS) Capstone (5 Days)	
Total Cost, Minimum Class Size:	\$28,908.00
Total Cost, Maximum Class Size:	\$31,270.00
Cost/Participant for Materials Only (For Class Sizes Between 11 and 25):	\$690.80
On Line Six Sigma Green Belt - Certification Program	\$1,846.05

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Training Courses / Length of Course	Course Rate	
Statistical Tools, SPC & MSA Training (4 Days)		
Total Cost, Minimum Class Size:	\$13,620.00	
Total Cost, Maximum Class Size:	\$17,250.00	
Cost/Participant for Materials Only (For Class Sizes Between 11 and 25):	\$242.00	
Advanced Statistical Tools for Black Belts Training (3 Days)		
Total Cost, Minimum Class Size:	\$10,688.00	
Total Cost, Maximum Class Size:	\$14,120.00	
Cost/Participant for Materials Only (For Class Sizes Between 11 and 25):	\$228.80	
Design of Experiments (DOE) Training (4 Days)		
Total Cost, Minimum Class Size:	\$13,620.00	
Total Cost, Maximum Class Size:	\$17,250.00	
Cost/Participant for Materials Only (For Class Sizes Between 11 and 25):	\$242.00	
Introduction to Reliability Testing and Analysis (2 Days)		
Total Cost, Minimum Class Size:	\$9,076.00	
Total Cost, Maximum Class Size:	\$14,290.00	
Cost/Participant for Materials Only (For Class Sizes Between 11 and 25):	\$347.60	

- 4. The attached training courses and labor category descriptions are hereby incorporated into and made a part of the contract (7 pages).
- 5. The Service Contract Act (SCA) is applicable to this contract as it applies to the entire MOBIS Schedule and all services provided. While no specific labor categories have been identified as being subject to SCA due to exemptions for professional employees (FAR 22.1101, 22.1102 and 29 CRF 541.300), this contract still maintains the provisions and protections for SCA eligible labor categories. If and / or when the contractor adds SCA labor categories / employees to the contract through the modification process, the contractor must inform the Contracting Officer and establish a SCA matrix identifying the GSA labor category titles, the occupational code, SCA labor category titles and the applicable wage determination number. Failure to do so may result in cancellation of the contract.
- 6. The following labor categories are hereby deleted from this contract: Senior Associate / Master Black Belt and Associate / Black Belt.
- 7. The following training courses are hereby deleted from this contract: Synchronizing Six Sigma or Lean Six Sigma to Government and Industry Training (2 Days), Lean Six Sigma or Six Sigma Champion Training (2 Days), Lean Six Sigma or Six Sigma Champion Training (3 Days), Lean Six Sigma or Six Sigma Yellow Belt Training (5 Days), Lean Six Sigma or Six Sigma Green Belt Training (10 Days), Lean Six Sigma or Six Sigma Service and Transactional Green Belt Training (10 Days), Lean Six Sigma or Six Sigma Black Belt Training (20 Days), Lean Six Sigma or Six Sigma Service and Transactional Black Belt Training (15 Days), On Line Six Sigma Green Belt Certificate Program, On Line Six Sigma Black Belt Certification, On Line Six Sigma Green Belt Knowledge Assessment, On Line Six Sigma Black Belt Knowledge Assessment, Six Sigma Master Black Belt/Train-the-Trainer (7 Days), Principles of Lean Operations Training (5 Days), Kaizen Workshop Training (7 Days), Value Stream Mapping Workshop Training (4 Days), Variance Reduction Workshop Training (1 Day) and Process Simulation Using Process Model Training (3 Days).

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8. SIN 874-5 and all support products are hereby deleted from this contract.

9. Business size changed from Large Business to Small Business.

Failure to update your electronic file submission IAW Clause 552.243-72 will impact the customer's ability to use your service.

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LABOR CATEGORY DESCRIPTIONS

Labor Category: CEO and President

General Experience: The Air Academy CEO and President have a minimum of twenty years of industry, government and/or consulting experience in both managing and improving a major enterprise. This includes extensive expertise in product, process and/or service design, development, test and evaluation, manufacturing, service, logistics and/or sales and marketing. Technical expertise in enterprise-level Lean Six Sigma program initialization, execution and assessment as well as related, enterprise-level quality systems improvement are also required.

Functional Experience: The Air Academy CEO and President are officers of the Company with extensive, significant and highly responsible industry, program management and leadership experience who provide leadership/executive level expert consultation and facilitation services.

Minimum Education: Bachelor of Art or Bachelor of Science, Master of Science and Ph.D. degrees in engineering, mathematics, statistics, operations research and/or business administration.

Labor Category: Vice-President

General Experience: An Air Academy Vice-President has a minimum of fifteen years of industry, government and/or consulting experience in product, process and/or service design, development, test and evaluation, manufacturing, service, logistics and/or sales and marketing. Significant and proven expertise in knowledge-based management and enterprise-level Lean Six Sigma program initialization, execution and assessment as well as related, enterprise-level quality systems improvement are also required.

Functional Experience: An Air Academy Vice-President is an officer of the Company with extensive, significant and highly responsible industry, program management and leadership experience who provide experienced and expert consultation and facilitation services to senior agency management.

Minimum Education: Bachelor of Art or Bachelor of Science and Master of Science degrees in engineering, mathematics, statistics, operations research and/or business administration.

Labor Category: Director

General Experience: An Air Academy Director has a minimum of ten years of industry, government and/or consulting experience in product, process and/or service design, development, test and evaluation, manufacturing, service, logistics and/or sales/marketing. Technical expertise in enterprise-level Lean Six Sigma program initialization, execution and assessment as well as related, enterprise-level quality systems improvement are also required.

Functional Experience: An Air Academy Director has extensive, significant and highly responsible industry, program management and managerial experience who lead the design and deployment of an enterprise-level Lean and/or Six Sigma program across all organizational boundaries. The Director also provides experienced and expert consultation and facilitation services to senior and mid-level agency management.

Minimum Education: Bachelor of Art or Bachelor of Science and Master of Science Degrees in Engineering, Mathematics, Statistics, Operations Research and/or Business Administration.

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COURSE DESCRIPTIONS

Lean Six Sigma Executive Training

Purpose: This one-day course is earmarked for executives and leaders who are considering the integration of Lean Six Sigma within and throughout all of their process, products, services and relationships. It provides critical information needed to make an informed decision on implementing or delaying the implementation of Lean Six Sigma.

Course agenda:

- I. The What and Why of Lean Six Sigma (Goals, Benefits, Principles, Variation, Cost of Poor Quality, ROI)
- II. First Line of Defense Against Variation to Generate Immediate Gains (Statapult Exercise)
- III. Knowledge-Based Lean Six Sigma Strategy (DMAIC, A Pull System for Tools and Techniques to Answer Questions, Gain Knowledge and Knowledge-Gaining Tools)
- IV. Lean Six Sigma Deployment and Implementation (Infrastructure, Roles and Responsibilities, Rollout, Scorecard, Project Selection, Project Savings, Leading Change, Critical Factors for a Successful Implementation)

Materials:

- 1. Text entitled "Knowledge Based Management" by Schmidt, Kiemele and Berdine
- 2. Guide entitled "Lean Six Sigma: A Tools Guide" by Adams, Kiemele, Pollock, Quan
- 3. Comprehensive Participant Guide

Six Sigma Executive Training

Purpose: This one-day course is earmarked for executives and leaders who are considering the integration of Six Sigma within and throughout their enterprises' processes, products, services and relationships. It provides critical information needed to make an informed decision on implementing or delaying the implementation of Six Sigma.

Course Agenda:

- I. The What and Why of Six Sigma (Goals, Benefits, Principles, Variation, Cost of Poor Quality, ROI)
- II. First Line of Defense Against Variation to Generate Immediate Gains (Statapult Exercise)
- III. Knowledge-Based Six Sigma Strategy (DMAIC, A Pull System for Tools and Techniques to Answer Questions, Gain Knowledge and Knowledge-Gaining Tools)
- IV. Six Sigma Deployment and Implementation (Infrastructure, Roles and Responsibilities, Rollout, Scorecard, Project Selection, Project Savings, Leading Change, Critical Factors for a Successful Implementation)

Materials:

- 1. Text entitled "Knowledge Based Management" by Schmidt, Kiemele and Berdine
- 2. Comprehensive Participant Guide

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<u>Design for Six Sigma (DFSS) Pre-Requisite or Design for Lean Six Sigma (DFLSS) Pre-Requisite (Pre-Req for DFSS or DFLSS)</u>

This one week course serves as an important prerequisite to the Design for Lean Six Sigma (DFLSS) or Design for Six Sigma (DFSS) "capstone" course. The subjects contained within this highly accelerated training are those covered in the four week Lean Six Sigma or Six Sigma Black Belt Course. This prerequisite can be waived if the participant has demonstrated proficiency in probability distributions, measurement system analysis and design of experiments. Either a designation as "Black Belt" from a recognized service provider or the satisfactory completion of this pre-requisite is required for entry into the

DFLSS or DFSS. If there are questions regarding either option, the agency is requested to contact Air Academy Associates at AAAUniversity@airacad.com.

Materials:

- 1. Text entitled "Basic Statistics: Tools for Continuous Improvement" by Kiemele, Schmidt and Berdine
- 2. SPC XL Software
- 3. Text entitled "Understanding Industrial Designed Experiments," Schmidt and Launsby
- 4. DOE PRO XL Software
- 5. Comprehensive Participant Guide

Design for Lean Six Sigma (DFLSS) Capstone or Design for Six Sigma (DFSS) Capstone Training

Unlike the Service and Transactional or "Technical" Lean Six Sigma or Six Sigma Training that focuses on the significant improvement of existing processes or products, DFLSS and DFSS focuses on creating new and "perfect" processes and products. DFLSS and DFSS represent proven ways of exceeding customer expectations, achieving earlier market share and attaining a significantly higher ROI. This class has five day duration. DFLSS and DFSS principles, tools, methodologies and an "IDOV" (Identify, Design, Optimize, Validate) roadmap are covered with numerous in-class exercises and examples.

Subjects that are addressed in this course include:

- -- Introduction to DFLSS/DFSS
- -- Impetus for Implementing DFLSS/DFSS
- -- The "IDOV" Project Life Cycle and Its Components
- -- Keeping Score (Part/Component, Process, Performance)
- -- Computing DPU
- -- Redundant Systems
- -- Voice of the Customer
- -- Strategic Planning/Benchmarking
- -- Identifying Critical-to-Customer (CTC) Requirements
- -- Pugh Concept Selection, Systems Engineering and Requirements Flow Down
- -- Transfer Functions
- -- Design for Robust Performance
- -- Tolerance Allocation
- -- Design for Manufacturability
- -- Basic Reliability Concepts
- -- Product Capability Prediction
- -- Testing and Validation
- -- Design Cycle Time Considerations
- -- Exercises

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Materials:

- 1. SPC XL Software
- 2. DOE PRO XL Software
- 3. SimWare Software
- 4. DFSS Master Software
- 5. Comprehensive Participant Guide

On Line Six Sigma Green Belt - Certification Program

In collaboration with Semizone and the Stanford University Center for Professional Development, Air Academy Associates offers agency employees online Six Sigma Green Belt Training. This training adheres to Air Academy's Keep-It-Simple-Statistically (KISS) approach, with the intention to avoid statistical complexity. There are a variety of Six Sigma tools and techniques, and enrollees will have an opportunity to practice them through the use of demonstrations and simulations. The main goals of this six sigma training program are to: (i) support the long-range business plan to achieve total customer satisfaction resulting in increased market share and improved profit margin; (ii) develop leaders in breakthrough technologies to meet stretch goals associated with Better, Faster, Lower Cost Products and Services; and (iii) develop a world-class culture for competitive advantage.

Participants must score at least 70% in the Green Belt Knowledge Assessment and complete an approved project to become a Certified Green Belt. Projects must be reviewed and approved by Air Academy Associates prior to receiving Certification. Participants who take this training also receive 2.65 Continuing Education Units.

Who should enroll in this training:

- Individuals interested in completing a Six Sigma Green Belt Training Certification programs and becoming a Certified Green Belt.
- Technicians, operators, managers, educators, engineers, and scientists working in a variety of fields including manufacturing, biomedical, computer, electronics, government, higher education, & the service sector.
- Individuals interested in learning the Define, Measure, Analyze, Improve, and Control (DMAIC) strategy for getting better products & services to market faster and at lower cost.
- Individuals who desires to become a practitioner of the Six Sigma methodology and tool set and who will be leading Six Sigma projects within an organization.
- Those interested in mastering the skills necessary to efficiently monitor, improve, characterize, and optimize their processes.
- Those interested in embracing the philosophy and the implementation of continuous quality improvement, and to gain a mastery over those skills that will in turn provide them with a substantial Return on Investment.

Subjects that are addressed in this course include:

- -- The Basics of Six Sigma
- -- The Soft Side of Six Sigma Success
- -- Making Sense of Data Using Graphical and Numerical Tools (Descriptive Statistics)
- -- Measure System Analysis (MSA)
- -- Analyzing the Process and Prioritizing the Focus
- -- Detecting Significant Differences from Sample Data (Inferential Statistics)
- -- Process Control and Process Capability
- -- Six Sigma Green Belt Knowledge Assessment

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-- Six Sigma Certificate and Certification Programs

Materials:

- 1. Text entitled "Knowledge Based Management" by Schmidt, Kiemele and Berdine
- 2. Text entitled "Basic Statistics: Tools for Continuous Improvement" by Kiemele, Schmidt and Berdine
- 3. Guide entitled "Lean Six Sigma: A Tools Guide" by Adams, Kiemele, Pollock, Quan
- 4. SPC XL Software
- 5. Notebook entitled "Knowledge Notebook"

Statistical Tools, SPC & MSA Training

This four day course provides the needed statistical tools, texts and software to transform data into knowledge and knowledge into excellent decision-making. Tools having an intermediate level of complexity are covered. Participants must have a working knowledge of Microsoft Excel and have the Microsoft Windows 98, 2000 or XP Operating System and Microsoft Excel pre-loaded onto their laptop computers prior to class.

Subjects addressed in this course include:

- -- The Impetus for Deploying Six Sigma in Government and industry.
- -- The Role of Statistics in Process Improvement
- -- Making Sense Out of Data Using Graphical and Measurement Tools
- -- Understanding Data Distributions and Their Applications
- -- Sampling Distributions and Confidence Intervals
- -- Drawing Conclusions When Comparing Data Sets
- -- Process Control and Process Capability
- -- Measurement System Analysis
- -- Special Topics Including Regression, Introduction to Design of Experiments, Categorical Data and Failure Modes and Effects Analysis

Materials:

- 1. Text entitled "Basic Statistics: Tools for Continuous Improvement" by Kiemele, Schmidt and Berdine
- 2. SPC XL Software
- 3. Comprehensive Participant Guide

Advanced Statistical Tools for Black Belts Training

This three day course provides the needed, advanced statistical tools, texts and software to transform data into knowledge and knowledge into excellent decision-making. Participants must have a working knowledge of Microsoft Excel and have the Microsoft Windows 98, 2000 or XP Operating System and Microsoft Excel preloaded onto their laptop computers prior to class.

Subjects addressed in this course include:

- -- Overview of Data Mining (Definitions and Tasks, Steps in the Data Mining Process, Facts Versus Myths and Data Mining Applications)
- -- Preparatory Steps (Data Preparation, Visualization and Dictionaries)

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- -- Background on Modeling (Dimensionality, Notation and Terms, Bias-Variance Tradeoff, Control of the Bias-Variance Tradeoff and Error Functions)
- -- Traditional Models (Linear Regression Procedures, Logistic Regression, Discriminant Analysis, Nearest Neighbors and Clustering Algorithms)
- -- Modern Models (Classification and Regression Trees, Neural Networks, Bump Hunting, Association Rules, Evaluating and Combining Models and a Survey of Recent Developments)

Materials:

- 1. XL Miner Trial Software
- 2. Comprehensive Participant Guide

Design of Experiments (DOE) Training

This four day course provides an essential understanding of what DOE is and its tremendous role in gaining process knowledge and reducing variation. Participants must have a working knowledge of Microsoft Excel and have the Microsoft Windows 98, 2000 or XP Operating System and Microsoft Excel pre-loaded onto their laptop computers prior to class.

Subjects addressed in this course include:

- -- Foundations and Overview of DOE
- -- Introduction to Design and Analysis
- -- Rules of Thumb
- -- Using Regression to Analyze Data
- -- Two-Level Design Summary
- -- Three-Level Design Summary
- -- Taguchi, Variance Reduction Methods, Robust Designs and Multivariate Charts
- -- Randomization and Multiple Response Optimization.

Materials:

- 1. Text entitled "Understanding Industrial Designed Experiments," Schmidt and Launsby
- 2. DOE PRO XL Software
- 3. Comprehensive Participant Guide

Introduction to Reliability Testing and Analysis

This two day course provides participants with an excellent foundation of reliability principles, tools and methodologies having direct applicability to engineering design, analysis and test/evaluation as well as manufacturing and service applications.

Subjects included in this course include:

- -- Basic Statistical Concepts
 - Confidence Intervals
 - Hypothesis Testing
- -- Graphical Tools
 - Dot Plot, Histogram and Box Plot
 - End Count Test

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- -- Reliability Concepts
 - Reliability Function
 - Hazard Function
 - Bathtub Curve
 - Censoring
- -- Common Reliability Distributions
 - Exponential
 - Weibull
 - Normal
 - Lognormal
- -- Nonparametric Reliability
 - Kaplan-Meier Estimates
 - Comparing Survival Curves
- -- Probability Plotting
 - Probability Paper
 - Distribution Identification
- -- Estimation
 - Least Squares Estimation
 - Maximum Likelihood Estimation
 - Estimating Percentile Failure Times
 - Estimating Probability of Failure
- -- System Failure
 - Series Systems
 - Parallel Systems
 - R out of N Systems
 - Competing Risk Model
 - Dealing with Multiple Failure Modes
- -- Planning Reliability Tests
 - Sample Size Calculations Using Simulation
 - Sample Size Calculations Using Large Sample Approximations
 - Zero Failure Testing
- -- Accelerated Life Testing (Time-Permitting)
 - Linear Acceleration
 - Testing for Equal Linear Acceleration
 - Arrhenius Acceleration

Materials:

1. Comprehensive Participant Guide